



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,258	11/26/2003	Brian Scott Crawford	8200.847	6143

7590 05/22/2006

LINIAK, BERENATO & WHITE
Suite 240
6550 Rock Spring Drive
Bethesda, MD 20817

EXAMINER

KIM, YOON YOUNG

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,258

Applicant(s)

CRAWFORD ET AL.

Examiner

Yoon-Young Kim

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Amendment filed on February 27, 2006.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al., U.S. Patent No. 6,423,225 B2 in view of Lynch et al., U.S. Patent No. 5,785,850.

Regarding Claim 1, Wong discloses a filter assembly for filtering a fluid, the filter assembly comprising: a substantially annular filter element (#12); a filter housing (#14) containing the filter element; an end plate (#32) secured to the filter housing, the end plate having at least one fluid inlet (#36); and a directional fluid insert (#40) having at least one of fin (#42), the at least one of fin provided to cause the fluid entering the filter housing through the at least one fluid inlet to swirl around the filter element. However, Wong does not disclose that the fin is disposed between the first end of the filter element and the end plate. Lynch teaches a filter assembly comprising fins (#59) disposed first end of the filter element (#16) and the end plate (#40). It would have been obvious to one of ordinary skill in the art to modify Wong by positioning the fin as in Lynch because they are both fluid filters with fluid inserts that cause the fluid to swirl around the filter.

Art Unit: 1723

Regarding Claim 2, Wong discloses that the end plate is permanently secured to the first end of the filter housing (Fig. 1).

Regarding Claim 3, Wong discloses that the end plate is further provided with at least one fluid outlet (#34).

Regarding Claim 4, Wong discloses that a directional fluid insert is formed as a single-piece plastic molding (Col. 3, Lines 50-55).

Regarding Claim 5, Wong discloses that the directional fluid insert is attached to the first end of the filter element (Fig. 1).

Regarding Claim 6, Wong discloses that the directional fluid insert includes a snap fit coupling for securing the directional fluid insert to the filter element (Col. 3, Lines 48-50) but does not disclose a snap fit to the first end. It would have been obvious to one of ordinary skill in the art to modify Wong to snap fit the directional fluid insert in the first embodiment because it is a means of attachment common in the filter art.

Regarding Claim 9, Wong discloses that at least one fin of the directional fluid insert has a substantially flat fluid deflecting surface canted at an angle with respect to a central axis of the filter assembly (Fig. 7).

3. Claims 1-3, 5-9, and 11-15 are rejected under 35 U.S.C. 103(a) as being obvious over Rhyne et al., U.S. Patent No. 6,761,822 B1 in view of Lynch.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of

Art Unit: 1723

invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding Claim 1, Rhyne discloses a filter assembly for filtering a fluid, the filter assembly comprising: a substantially annular filter element (#40); a filter housing (#12) containing the filter element; an end plate (#18) secured to the filter housing, the end plate having at least one fluid inlet (#20); and a directional fluid insert (#120) having at least one of fin (#122), the at least one of fin provided to cause the fluid entering the filter housing through the at least one fluid inlet to swirl around the filter element. However, Rhyne does not disclose that the fin is disposed between the first end of the filter element and the end plate. Lynch teaches a filter assembly comprising fins (#59) disposed first end of the filter element (#16) and the end plate (#40). It would have been obvious to one of ordinary skill in the art to modify Rhyne by positioning the fin as in Lynch because they are both fluid filters with fluid inserts that cause the fluid to swirl around the filter.

Regarding Claim 2, Rhyne discloses that the end plate is permanently secured to the first end of the filter housing (Fig. 1).

Regarding Claim 3, Rhyne discloses that the end plate is further provided with at least one fluid outlet (#22).

Regarding Claim 5, Rhyne discloses that the directional fluid insert is attached to the first end of the filter element (Fig. 1).

Regarding Claim 6, Rhyne discloses that the directional fluid insert includes a snap fit coupling for securing the directional fluid insert to the first end of the filter element (Col. 5., Lines 14-18).

Regarding Claims 7 and 12, Rhyne discloses that the snap fit coupling includes a plurality of flexible mounting tabs (#142) formed integrally with and axially extending from the directional fluid insert.

Regarding Claim 8, Rhyne discloses that at least one fin (Fig. 5, #122) of the directional fluid insert has a substantially curved fluid deflecting surface.

Regarding Claim 9, Rhyne discloses that at least one fin of the directional fluid insert has a substantially flat fluid deflecting surface canted at an angle with respect to a central axis of the filter assembly (Fig. 4).

Regarding Claim 11, Rhyne discloses that the directional fluid insert includes a substantially annular base ring (#140) formed integrally with a plurality of fins.

Regarding Claim 13, Rhyne discloses that the plurality of the fins extend substantially radially from the base ring (Fig. 5).

Regarding Claim 14, Rhyne does not disclose an annular outer ring. Lynch teaches a filter assembly comprising an outer ring (Fig. 4, #46) connected to the base ring (#60). It would have been obvious to one of ordinary skill in the art to modify Rhyne with the element of Lynch because they are both oil filters with fluid inserts that cause the fluid to swirl around the filter.

Regarding Claim 15, it would have been obvious to combine the mounting tabs (#142) of Rhyne with the outer ring (#46) of Lynch to be coupled to the insert to the filter element because they are a means of attachment common in the filter art.

Art Unit: 1723

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Lynch as applied to Claim 1 above, and further in view of Janik et al., U.S. Patent No. 5,938,921.

Regarding Claim 10, Wong in view of Lynch does not disclose a continuous spiral fin. Janik teaches a filter assembly comprising a filter insert with a spiral fin (Fig. 2, #56). It would have been obvious to one of ordinary skill in the art to modify Wong with the element of Janik because they are both fluid filters with fluid inserts that cause swirling of the fluid.

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being obvious over Wong in view of Lynch and Rhyne.

Regarding Claim 16, Wong discloses a filter assembly for filtering a fluid, the filter assembly comprising: a substantially annular filter element (#12); a filter housing (#14) containing the filter element; an end plate (#32) secured to the filter housing, the end plate having a central fluid outlet (#34) and a plurality of fluid inlets (#36); and a directional fluid insert (#40) having a plurality of fins (#42), the at fins provided to cause the fluid entering the filter housing through the at least one fluid inlet to swirl around the filter element; wherein the directional fluid insert is formed as a single-piece plastic molding (Col. 3, Lines 50-55).

However, Wong does not disclose that the fin is disposed between the first end of the filter element and the end plate or a base ring or mounting tabs. Lynch teaches a filter assembly comprising fins (#59) disposed first end of the filter element (#16) and the end plate (#40). Rhyne teaches a filter assembly comprising a directional fluid insert includes a substantially annular base ring (#140) formed integrally with a plurality of fins that the snap fit coupling includes a plurality of flexible mounting tabs (#142) formed integrally with and axially extending from the directional fluid insert. It would have been obvious to one of ordinary skill in the art to

Art Unit: 1723

modify Wong with the element of Lynch and Rhyne because they are both fluid filters with fluid inserts that cause the fluid to swirl around the filter.

6. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Rhyne and Lynch.

Regarding Claim 17, Wong discloses a filter assembly for filtering a fluid, the filter assembly comprising: a substantially annular filter element (#12); a filter housing (#14) containing the filter element; an end plate (#32) secured to the filter housing, the end plate having a central fluid outlet (#34) and a plurality of fluid inlets (#36); and a directional fluid insert (#40) having a plurality of fins (#42) disposed between the filter element and the end plate, the at fins provided to cause the fluid entering the filter housing through the at least one fluid inlet to swirl around the filter element, each of the fins having a substantially flat fluid deflecting surface canted at an angle with respect to a central axis of the filter assembly (Fig. 7); wherein the directional fluid insert is formed as a single-piece plastic molding (Col. 3, Lines 50-55).

However, Wong does not disclose that the fin is disposed between the first end of the filter element and the end plate or a base ring, outer ring, or mounting tabs. Lynch teaches a filter assembly comprising fins (#59) disposed first end of the filter element (#16) and the end plate (#40) and comprising an outer ring (Fig. 4, #46) connected to the base ring (#60). Rhyne teaches a filter assembly comprising a directional fluid insert includes a substantially annular base ring (#140) formed integrally with a plurality of fins that the snap fit coupling includes a plurality of flexible mounting tabs (#142) formed integrally with and axially extending from the directional fluid insert. It would have been obvious to one of ordinary skill in the art to modify Wong with the elements of Rhyne and Lynch because they are all fluid filters with fluid inserts that cause the fluid to swirl around the filter.

Response to Arguments

7. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument, Rhyne does disclose a plurality of flexible mounting tabs (#142) formed integrally with and axially extending from the fins. The mounting tabs project lengthwise in an inward direction from the band which is unitary with the fins (Col. 5, Lines 10-19). However, the tabs have a thickness which extends in the axial direction the fins extend in an axial direction (Fig. 4).

In response to applicant's argument that the combination and/or modification of Wong and Janik could not be possible, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Regarding Claim 10, the fins of Wong and the spiraling rim of Janik are both structures that cause the fluid to move in a swirling motion. It would have been obvious to one of ordinary skill in the art to modify the fin structure of Wong with the single spiral structure of Janik because they are both fluid filters with fluid inserts that cause swirling of the fluid.

Conclusion

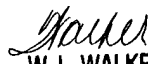
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yoon-Young Kim whose telephone number is (571) 272-2240. The examiner can normally be reached on 8:30-4:30, Mon-Fri.

Art Unit: 1723

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YK
05/15/06


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700